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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,146	10/20/2003	Thomas D. Kennedy	D-43375-02	2785
28236	7590	08/04/2004	EXAMINER	
CRYOVAC, INC. SEALED AIR CORP P.O. BOX 464 DUNCAN, SC 29334			AUGHENBAUGH, WALTER	
			ART UNIT	PAPER NUMBER
			1772	

DATE MAILED: 08/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/689,146

Applicant(s)

KENNEDY ET AL.

Examiner

Walter B Aughenbaugh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 24-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 24-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7 in total.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 28 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 24, upon which claim 28 depends, requires that the indicator comprise a printed image as claimed in claim 28.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 28 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 28 fails to further limit claim 24 since claim 24 requires that the indicator comprise a printed image as claimed in claim 28.

### ***Claim Rejections - 35 USC § 103***

4. Claims 24-26 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Speer et al. in view of Inoue et al.

In regard to claims 24 and 28, Speer et al. teach a multilayer film comprising a first layer comprising an oxygen scavenger layer, an oxygen barrier having an oxygen transmission rate of no more than 25 cc oxygen/m<sup>2</sup>/24hr and a second layer comprising an adhesive where the adhesive is adhered to the first layer (col. 11, lines 4-11 and 50-62 and col. 12, lines 31-35). Speer et al. teach the multilayer film in the form of a non-integral packaging component such as an adhesive sheet insert (i.e. a patch, col. 4, lines

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8-14). Speer et al. fail to teach that an oxygen indicator comprising a luminescent compound is disposed on the second layer.

Inoue et al., however, teaches an article comprising both an oxygen indicator and an oxygen scavenger (col. 3, lines 35-41 and col. 4, lines 9-19). The oxygen indicator of Inoue et al. is used to indicate the presence or absence of oxygen based on the color of the indicator (col. 1, lines 15-20 and col. 8, lines 50-64). Inoue et al. teach that the oxygen indicator includes a dyestuff selected from the group consisting of thiazine dyestuffs, indigo dyestuffs and mixtures thereof (col. 1, lines 55-64). Thiazine dyestuffs are luminescent, as evidenced by Miyasaka et al. (enclosed with this Office Action), which discloses that thiazine dyes are suitable light-harvesting dyes (col. 6, lines 23-31), which are defined by Miyasaka et al. as luminescent (col. 4, lines 3-4). Inoue et al. teach that the oxygen indicator composition includes an adhesive binder (col. 3, line 48-col. 4, line 3) and is printed on a substrate such as the inside of a transparent film having an oxygen barrier property (col. 4, lines 9-19). Inoue et al. teach that the oxygen indicator is printed on a film (col. 3, lines 35-41), consequently forming an image. It is well known to those of ordinary skill in the art that indicators are often printed onto film substrates in a discontinuous manner/pattern in order to make use of the indicator in an economical manner. The print pattern of the indicator is a matter of aesthetics and is a choice of the appearance of the final product; there is no criticality to the issue of patentability in regard to the geometry of the indicator print pattern (image). Therefore, one of ordinary skill in the art would have recognized to have printed the indicator layer of Inoue et al. as a printed image on the adhesive layer of Speer et al. in order to utilize the indicator to

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determine the amount of oxygen that permeates through the barrier layer of Speer et al. to the inside of the article as taught by Inoue et al.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have printed the indicator layer of Inoue et al. as a printed image on the adhesive layer of Speer et al. in order to utilize the indicator to determine the amount of oxygen that permeates through the barrier layer of Speer et al. to the inside of the article as taught by Inoue et al.

In regard to claim 25, Speer et al. teach that the barrier layer is polyvinylidene chloride (PVDC) or ethylene vinyl alcohol (EVOH) (col. 11, lines 30-31).

In regard to claim 26, the anhydride functional adhesive polyolefins taught by Speer et al. are hot melt adhesives (col. 9, lines 10-24) as evidenced by, e.g., col. 3, lines 62-64 of U.S. 5,912,090 to Nagai et al.

5. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Speer et al. in view of Inoue et al., and in further view of Khalil et al.

Speer et al. and Inoue et al. teach the patch as discussed above. Speer et al. and Inoue et al. fail to teach that the luminescent compound comprises at least one material selected from the group consisting of metallo derivatives of octaethylporphyrin, tetraphenylporphyrin, tetrabenzoporphyrin, or the chlorins, bacteriochlorins, or isobacteriochlorins thereof. However, Khalil et al. teach that metallo derivatives of partially or fully fluorinated octaethylporphyrin, tetraphenylporphyrin, tetrabenzoporphyrin, or the chlorins, bacteriochlorins, or isobacteriochlorins thereof are suitable luminescent molecules for use in the method for measuring oxygen concentration of Khalil et al. (col. 2, lines 46-63). Therefore, one of ordinary skill in the art would have

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recognized to have used octaethylporphyrin, tetraphenylporphyrin, tetrabenzoporphyrin, or the chlorins, bacteriochlorins, or isobacteriochlorins thereof as the luminescent molecule of Speer et al. and Inoue et al. since Khalil et al. disclose that these molecules are suitable for use for measuring oxygen concentration.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used octaethylporphyrin, tetraphenylporphyrin, tetrabenzoporphyrin, or the chlorins, bacteriochlorins, or isobacteriochlorins thereof as the luminescent molecule of Speer et al. and Inoue et al. since Khalil et al. disclose that these molecules are suitable for use for measuring oxygen concentration.

### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter B. Aughenbaugh whose telephone number is 571-272-1488. The examiner can normally be reached on Monday-Thursday from 9:00am to 6:00pm and on alternate Fridays from 9:00am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you

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have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Walter B. Aughenbaugh  
07/30/04

WBA

  
HAROLD PYON  
SUPERVISORY PATENT EXAMINER

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8/2/04